Comments on NPRM FCC 04-29 (Access Broadband over Power Lines)

ET Docket No. 03-104, ET Docket No. 04-37

Allowed proliferation of BPL is premature. Inadequate consideration has been given to potential interference and remedies of that interference.

- Appendix C b.2 states the measurements will be made at a mid-frequency point. The measurements should be made with stipulations of any and all frequencies. Perhaps even the total of RF energy radiated should be specified.

- No consideration or testing has been made concerning the effects of accumulated (added) signals. The proposed frequencies are subject to D, E and F layer reflection, as well as other means such as thermal ducting, so the effects of distant reception may be the sum of all energy radiated by BPL providers.

Simple analogy: One flashlight is not visible at ½ mile while fifty flashlights are. Hundreds if not thousands of active BPL transmitters and repeaters would represent a very significant energy source.

Example: A local TV station wished to use a 900mhz link from a high, but rural, point. They found the sum total of radiation from surrounding 900mhz devices rendered their equipment useless.

I believe that the possibility of distant interference is very real.

- While the NPRM assures us that the Part 15 user must mitigate interference problems, it does not provide the user who is being interfered with a means of positive identification. These signals will be spread spectrum data signals and generally someone experiencing interference will not have equipment capable of identifying the source. BPL providers should be required to provide an identification that is intelligible to a common licensed user, such as something as simple as CW identification.

- The idea that power line itself can act as an antenna is being denied. My understanding is that a feed line must be electrically perfectly balanced with the correct termination before the feed line exhibits no radiation. As I look out my window I see a new power line with two conductors vertically placed on the poles so one is about four feet nearer the ground than the other. Those two conductors do not have identical electrical properties in the 2 to 80mhz range. It is not a balanced feed line; it will radiate some portion of applied RF energy.

If this is not the technology being proposed, that needs to be made known. However, the NPRM alludes to the fact that there is much work to be done in determining the technology and equipment to be used. Hence, one can only conclude the whole plan is premature.

- The BPL proposal presumes that existing radio services in the 2 to 80mhz spectrum are status quo. It should be obvious that more sensitive equipment and new modes of communications will be developed and utilized. Allowing BPL as described to date can and will be a detriment to further developments.

I fear the comments of the commissioners and much more of the text of FCC 04-29 is hollow rhetoric. Issues such as BPL providing competition and lower prices are unfounded. The notion of the "data age" being available at every electrical outlet is open for serious debate. In fact, once allowed and implemented (money invested) BPL will be another irreversible decision we have to live with. The Commission needs to take this issue back and seriously rethink it.

Respectfully,

Ed Toal 22 March 2004